



## Pinnacle PP 2108

### Pinnacle Polymers - Polypropylene Impact Copolymer

Tuesday, November 5, 2019

#### General Information

##### Product Description

8 MELT FLOW MEDIUM IMPACT COPOLYMER POLYPROPYLENE

Pinnacle Polymers Polypropylene 2108 is made via UNIPOL™ PP technology, which utilizes gas-phase fluidized bed reactors with a high activity catalyst system to ensure uniform physical properties and lot-to-lot consistency.

This product is intended for sheet extrusion, thermoformed containers, and injection molding applications where toughness and cold temperature impact strength are required.

The 2108 product provides:

- Excellent cleanliness
- Superior toughness
- Excellent color and process stability
- Good melt strength
- UL Listed

Pinnacle's 2108 polypropylene is covered under US FDA Food Contact Notification 864. As such, this polymer can be used in contact with all food types under Conditions of Use A-H, as described in 21 CFR 176.170, Tables 1 and 2. This polymer also complies with 21 CFR 177.1520(c), items 3.1(a) and 3.2(a).

##### General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Features	• Clean/High Purity • Food Contact Acceptable • Good Color Stability	• Good Melt Strength • Good Processing Stability • Good Toughness	• Impact Copolymer • Low Temperature Impact Resistance • Medium Impact Resistance
Uses	• Sheet	• Thermoformed Containers	
Agency Ratings	• FDA 21 CFR 176.170 Table 1 & 2, Cond A-H • FDA 21 CFR 177.1520(c) 3.1a	• FDA 21 CFR 177.1520(c) 3.2a • UL Unspecified Rating	
Forms	• Pellets		
Processing Method	• Injection Molding	• Sheet Extrusion	• Thermoforming

#### ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density	0.900	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (230°C/2.16 kg)	8.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.015	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield, 0.126 in, Injection Molded)	3510	psi	ASTM D638
Tensile Elongation <sup>2</sup> (Yield, 0.126 in, Injection Molded)	11	%	ASTM D638
Flexural Modulus - 1% Secant <sup>3</sup> (0.126 in, Injection Molded)	185000	psi	ASTM D790A
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact <sup>4</sup> (73°F, 0.126 in, Injection Molded)	> 6.0	ft-lb/in	ASTM D256
Notched Izod Impact (Area) <sup>4</sup> 73°F, 0.126 in, Injection Molded	> 14.8	ft-lb/in <sup>2</sup>	ASTM D256

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Impact	Nominal Value	Unit	Test Method
Gardner Impact <sup>5</sup> (-22°F)	> 1330	in-lb	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	219	°F	ASTM D648

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Type I, 2.0 in/min

<sup>3</sup> Type I, 0.050 in/min

<sup>4</sup> Type I

<sup>5</sup> Method G, Geometry GC